AMENDMENTS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) ~~A single-chip~~ An integrated circuit for controlling an optoelectronic transceiver having a laser transmitter and a photodiode receiver, comprising:

memory, including one or more memory arrays for storing information related to the transceiver;

analog to digital conversion circuitry for receiving at least one analog signal, the at least one analog signal corresponding to operating conditions of the optoelectronic transceiver, converting the at least one analog signal into at least one digital value, and storing the at least one digital value in at least one predefined location in the memory;

an interface configured to enable a host to read from and write to host-specified locations within the memory and to enable the host to read from the at least one predefined location in the memory;

comparison logic configured to compare the at least one digital value with a limit value to generate a flag value; and

operation disable circuitry configured to disable operation of at least part of the optoelectronic transceiver in response to a signal, wherein the signal is based on said flag value.

2. (Currently Amended) The ~~single-chip~~ integrated circuit of claim 1, wherein the operation disable circuitry is configured to disable operation of the optoelectronic transceiver in response to a signal sent to a disable pin in the optoelectronic transceiver.

3. (Currently Amended) The ~~single-chip~~ integrated circuit of claim 1, wherein the limit value is dependent on a temperature of the optoelectronic transceiver.

4. (Currently Amended) A ~~single-chip~~ integrated circuit for controlling an optoelectronic transceiver having a laser transmitter and a photodiode receiver, comprising:

memory, including one or more memory arrays for storing information related to the transceiver;

analog to digital conversion circuitry for receiving at least one analog signal, the at least one analog signal corresponding to operating conditions of the optoelectronic transceiver, converting the at least one analog signal into at least one digital value, and storing the at least one digital value in at least one predefined location in the memory;

control circuitry configured to generate control signals to control operation of the laser transmitter in accordance with one or more values stored in the memory;

an interface configured to enable a host to read from and write to host specified locations within the memory; and

comparison logic configured to compare the at least one digital value with a limit value to generate a flag value;

wherein the control circuitry includes operation disable circuitry configured to disable operation of at least part of the optoelectronic transceiver in response to a disable signal generated by the control circuitry based on the flag value.

5. (Currently Amended) The ~~single-chip~~ integrated circuit of claim 4, wherein the operation disable circuitry is configured to disable operation of the optoelectronic transceiver in response to a signal sent to a disable pin in the optoelectronic transceiver.

6. (Currently Amended) The ~~single-chip~~ integrated circuit of claim 4, wherein the limit value is dependent on a temperature of the optoelectronic transceiver.

7. (Currently Amended) The ~~single-chip~~ integrated circuit of claim 4, further comprising a temperature look up table used in generating control signals based on a temperature of the optoelectronic transceiver.

8. (Currently Amended) ~~A single-chip~~ An integrated circuit for controlling an optoelectronic transceiver having a laser transmitter and a photodiode receiver, comprising:

memory, including one or more memory arrays for storing information related to the transceiver;

analog to digital conversion circuitry for receiving at least one analog signal, the at least one analog signal corresponding to operating conditions of the optoelectronic transceiver, converting the at least one analog signal into at least one digital value, and storing the at least one digital value in at least one predefined location in the memory;

control circuitry configured to generate control signals to control operation of the laser transmitter in accordance with one or more values stored in the memory;

an interface for allowing a host to read from and write to host specified locations within the memory; and

wherein the control circuitry includes circuitry configured to adjust one or more control signals in accordance with an adjustment value stored in the memory by the host via said interface.

9. (Currently Amended) The ~~single-chip~~ integrated circuit of claim 8, wherein the adjustment value corresponds to a deviation from a configured operating condition of the optoelectronic transceiver.

10. (Currently Amended) The ~~single-chip~~ integrated circuit of claim 8, wherein the control circuitry is configured to adjust the one or more control signals by scaling the control signals.

11. (Currently Amended) The ~~single-chip~~ integrated circuit of claim 8, wherein the control circuitry is configured to adjust the one or more control signals by an amount specified by the adjustment value.

12. (Currently Amended) A method of controlling an optoelectronic transceiver having a laser transmitter and a photodiode receiver, comprising:

in accordance with instructions received from a host device, enabling the host device to read from and write to host specified locations within a controller of the optoelectronic transceiver;

receiving a plurality of analog signals from the laser transmitter and photodiode receiver, converting the received analog signals into digital values, and storing the digital values in the controller; and

generating control signals to control operation of the laser transmitter in accordance with one or more values stored in [[the]] predefined memory mapped locations within the controller; and

testing operation of the device at a known deviation from a configured operating condition of the optoelectronic transceiver by adjusting one or more control signals in accordance with an adjustment value stored in the ~~memory~~ controller.

13. (Original) The method of claim 12, wherein the adjusting includes scaling the control signals by the adjustment value.